January 16, 1877.

Professor Newton, F.R.S., V.P., in the Chair.

Mr. Sclater exhibited a collection of Mammals, Birds, and Insects which had been formed by the Rev. George Brown, C.M.Z.S., during his recent residence in Duke-of-York Island and his excursions to the neighbouring islands of New Britain and New Ireland, with the assistance of a collector, Mr. Cockerell. The general facies of the collection was strongly Papuan. Mr. Sclater pointed out the great interest which attached to the fauna of these islands, as showing many representatives of some of the most marked characteristic forms of New Guinea, and promised further details, on the collections which had been transmitted to him to be worked out, at a future meeting of the Society.

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A communication was read from Mr. G. Krefft, C.M.Z.S., containing some notes on a young example of *Casuarius australis* living in Sydney, which was destined for the Society's Collection.

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The following papers were read:—

## 1. On the Birds of the North Polar Basin.

By Capt. H. W. Feilden, C.M.Z.S.

[Received January 16, 1877.]

I shall endeavour in the few remarks I make this evening to draw your attention especially to the distribution of bird-life along the shores of the Polar Basin between the latitudes of 82° and 83°, the most northern land ever yet visited by human beings. I shall not allude to the ornithology of the West-Greenland shores and that of Baffin's Bay, which we are well acquainted with through the labours of Sabine, Holböll, Reinhardt, and several other excellent Danish naturalists; but I will take you at one step to the 78° of N. lat. and draw your attention to the area lying between the 60° and 75° of W. long., and as far north as the 83rd parallel of N. lat., which embraces Smith's Sound, Kane's Basin, Kennedy Channel, Hall's Basin, Robeson Channel, and part of the shores of the great frozen Polar Basin. After pushing through the middle pack of Melville Bay and entering the "North Water" of the whalers, which usually extends in the summer months from Cape York to Cape Alexander, Arctic voyagers have always been impressed with the enormous numbers of the Little Auk (*Mergulus alle*) which frequent this region, attracted no doubt by the vast amount of suitable food which it contains. *Mergulus alle* breeds in countless numbers in the cliffs around Port Foulke; and for a most graphic account of the Aukeries I refer you to Dr. Hayes's description published in his interesting volume 'The Open Polar Sea.' At Port Foulke we found the surface-temperature of

the sea on the 28th July +35° Fahr.; on the 29th, after entering Smith's Sound, the temperature fell to +31°, rising again in Buchanan Strait to +34°, where birds were comparatively abundant both in species and in numbers. On the 4th of August in the main channel the temperature fell to +30° and +31°, rising again in the shallower waters of Franklin-Pierce Bay to +33°; and as we proceeded northwards up the main channel the water fell to +29°, which became its normal temperature until frozen over. I insert these observations on temperature because I am led from them to the conclusion that the distribution of the Arctic species of birds that derive their sustenance from the sea is dependent in a great measure on the surface-temperature of the sea-water. After crossing the North Water on the 29th July 1875, and passing north of Cape Isabella, *Mergulus alle* disappeared. A few Fulmars (*Procellaria glacialis*) followed the ship; but on the following day, when we were embayed in the ice off Cape Sabine, they had all left us. Taking shelter from the pack drifting down the Sound we found a commodious little harbour with open water close to Cape Sabine. There we found a colony of about 25 pairs of *Larus glaucus* breeding, the young nearly ready to fly. Some 6 or 7 pairs of Ivory Gulls (*Pagophila eburnea*) frequented this harbour; but we failed to discover their nesting-haunts. We noticed a pair of Ravens (*Corvus corax*); and many Eiders (*Somateria mollissima*) were breeding on the small islets, the eggs deeply incubated on the 1st of August. On the 4th of August we had worked round Cape Sabine into Buchanan Strait. There we noticed a few *Mergulus alle*, two or three examples of *Alca arra*, several *Sterna macrura*, and on shore several *Plectrophanes nivalis*, and a single example of *Ægialitis hiaticula*, which proved to be a ♀. On the 10th and 11th of August we found a few Eiders (*Somateria mollissima*) breeding on Norman-Lockyer Island, two pairs of *Sterna macrura* breeding, and one or two *Pagophila eburnea* hovering over pools and cracks in the floe. On the 14th of August, at Cape Hilgard, we found the Black Guillemot (*Uria grylle*) breeding in the limestone cliffs at an elevation of from 400 to 500 feet, and noticed a solitary *Larus glaucus* cruising along the shore. Our sportsmen also procured that day on the shores of Dobbin Bay a ♀ and ♂ adult *Lagopus rupestris* and three young ones. A flock of three Turnstones (*Strepsilas interpres*) passed the ship, flying south; I shot one, a bird of the year. August 16th, near Hayes point, Mr. Hart observed a pair of White Falcons (*Falco candicans*) nesting in a lofty cliff. A few miles further north I saw a pair of Ivory Gulls nesting in a high precipice; but it was impossible to reach the spot. On August 13th, when embayed in the ice near the shore in N. lat. 79° 37′, Black Guillemots were observed to be nesting in the cliffs in considerable numbers.

During our run from Cape Collinson through Kennedy Channel, which was comparatively open, to Bessel's Bay I did not notice a single bird; but in Bessel's Bay Black Guillemots (*Uria grylle*) were numerous, and a considerable number of *Somateriæ* with their young broods were seen on the 23rd of August. Discovery Bay was

reached on the 25th of August: 81° 44′. There we saw several examples of *Tringa canutus* in small flocks, evidently migrating south. These birds were already in winter plumage. I also observed several Turnstones. On the 26th of August I found eight or ten pairs of *Sterna macrura* breeding on a small islet at the entrance to Discovery Bay. The land by this date was covered with autumn snow; but I found a downy living young one in a nest from which the old birds had scooped out the snow and piled around the depression. Sept. 1st, 1875, I observed a single Ivory Gull flying round the ship in Lincoln Bay; and during a pelting snow-storm, as we rounded Cape Union in 82° 15′ a single *Strepsilas interpres* hovered for a short time under the lee of our ship. On that day we attained our highest northern latitude in the vessel, viz. 82° 28′; and as we ran in for shelter from the pack, between the shore and the grounded hummocks I saw a family party of *Harelda glacialis*, 7 or 8 in number, seated on a small piece of ice. Landing, I waded knee-deep through soft snow which then covered the shore, but failed to get a shot. I also saw a fine *Larus glaucus*, which I tried to stalk in vain. Sept. 2, a single Dovekie (*Uria grylle*) flew past the ship, flying south, the last of this species observed that year. Sept. 5th, Markham and Aldrich, at Dumbell Harbour, in lat. 82° 30′, came across 11 Eiders, three old females and their broods, in a tide-crack. They killed five with their rifles, but were not able to get hold of any of them, the ice around the crack being too treacherous. They also observed a single Turnstone. Sept. 19th, a pair of *Harelda glacialis* alighted in a pool near the ship and were obtained. Sept. 29th, near Point Hercules, in lat. 82° 40′, the autumn sledgers observed four *Lagopus rupestris* in winter plumage. Oct. 2nd, I observed a Snowy Owl seated on the top of a hummock, about a mile from our winter quarters. After this over five months elapsed before any feathered creature reappeared; but in the afternoon of the 11th March, 1876, the quartermaster on watch reported three white birds as having flown past the ship. They were probably *Lagopus rupestris*, as a few days after, on the 17th, tracks of these birds were observed in the snow at various points within a few miles of the ship. On the 29th March Lieut. Parr saw a Snowy Owl, very wild. On the 13th May, 1876, I heard the first Snow-Bunting (*Plectrophanes nivalis*), as we lay in our tent on the floe at the base of a cliff. The note came from above, clear and musical, and each inmate of the tent started into a sitting posture, and said "Hush, hush, do you hear it?" One of the sailors said to me, "What bird is that, sir? it is sweeter than a throstle." On the return of the northern sledge-party, Lieut. Parr on the 27th May met with a straggling Snow-Bunting near to the 83° of N. lat. So this species can claim for itself the highest northern range yet recorded of any bird. June 5th, whilst travelling in lat. 82° 33′, I observed the first Knots, Sanderlings, and Turnstones; a flock of Brent Geese passed over our heads. June 6th, noticed first Long-tailed Skuas (*Stercorarius longicaudatus*). June 24th, noticed first *Somateria spectabilis*.

The following is a systematic list of the species of birds met with along the shores of the Polar Basin :—

1. Nyctea scandiaca.

Several pairs seen ; found breeding. Feeds on Lemmings.

2. Plectrophanes nivalis.

Generally dispersed ; breeding.

3. Lagopus rupestris.

Undoubtedly breeding, but nest not found. About ten brace were killed by various members of the ship's company ; I killed one in 82° 46′.

4. Strepsilas intepres.

A few pairs observed, undoubtedly breeding ; but though we searched long and carefully, we did not find the nest.

5. Calidris arenaria.

A few pairs noticed. Obtained breeding in 82° 33′ N. lat.

6. Phalaropus fulicarius.

I noticed this bird twice—a ♀ killed near the ship in lat. 82° 27′, and a pair, evidently breeding, on a small lake in lat. 82° 30′.

7. Tringa canutus.

The commonest of the Waders, remains in flocks the whole summer. Very wild, but breeding. Unable to find nest ; but we captured the young in down.

8. Sterna macrura.

Not uncommon ; we noticed 6 or 8 pairs scattered along the coast-lines we visited. Found breeding.

9. Larus glaucus.

Observed on several occasions, but only as a straggler.

10. Stercorarius longicaudatus.

Scattered along the coast ; every two or three miles a pair were to be found breeding. They live on Lemmings.

11. Procellaria glacialis.

A single example picked up dead in lat. 82° 30′.

12. Uria grylle.

Two examples observed, one in the autumn of 1875, the other in June 1876 ; evidently stragglers.

13. Colymbus (species uncertain).

Seen 2nd September, 1875.

14. Harelda glacialis.

A few pairs, undoubtedly breeding. Nest not discovered.

15. Somateria spectabilis.

The only Eider noticed north of Cape Union; breeding in limited numbers.

16. Bernicla brenta.

Not uncommon along the shores of the Polar Basin, breeding.

## 2. Notes on some of the smaller Mammals of the Argentine Republic. By Henry Durnford.

[Received December 18, 1876.]

[Mr. Henry Durnford, now resident near Buenos Ayres and well known as a diligent collector of birds, has sent me specimens of three small Mammals, with the subjoined notes on their habits. I trust he may be induced to continue his researches in this department, as the smaller Rodents of La Plata are still very imperfectly understood. Mr. Alston has kindly determined the species.—P. L. S.]

1. Hesperomys vulpinus (Licht.); Burm. Syst. Ueb. Th. Bras. i. p. 163.

This Rat is not common, and from its habits and the inaccessible places it frequents is difficult to obtain. Hitherto I have only found it in lagunes to the north of Buenos Ayres, where the reeds and aquatic plants afford plenty of cover. In these extensive swamps it lives, making a large oval nest of rushes and grass, the finer fibres towards the interior, and generally building its dwelling about a foot above the water, amongst the reeds, but sometimes higher than this. It swims and dives with great ease and rapidity. Its food, so far as I have observed from the only two specimens I have obtained, consists of aquatic weeds and grass.

2. Hesperomys eliurus, Wagner; Burm. op. cit. p. 173.

This Mouse is found in the same places as the preceding species, and is much more common than that animal. It lives amongst thick reeds, making a small oval nest of grass and fine rushes. Its chief peculiarity is the length of its hind legs, which enables it to take enormous leaps for so small an animal; and this is very necessary, as its only means of escape is by jumping from its nest, sometimes three feet above the water, into the weeds which cover the surface of the lagunes. It dives and swims with great rapidity. It is very often found in the nests of *Synallaxis melanops*, which are numerous, and generally about the same height above the water as its own.

3. Didelphys crassicaudata (Desm.).

This is the *Comadreja colorada* of the country. It is rare, lives in old hollow trees, roofs of houses, &c., and sometimes commits great havoc in the poultry-yard. The other species of Comadreja[1] is quite common.

[1] [*Didelphys azaræ*?—Ed.]

## 3. Note on the Solid-hoofed Pigs in the Society's Collection. By A. H. Garrod, F.R.S., Prosector to the Society.

On November 2nd, 1876, there arrived in the Gardens a pair of Pigs (domestic variety) presented to the Society by Don J. Alfonso de Aldama, from Cuba, peculiar in that the hoofs of all the feet, instead of being cloven, are solid, much resembling those of the Ass, with the lateral diminutive digits as they are always found in the Pig.

The sow gave birth on November 15th to a litter of six, three males and three females. Of these the hoofs were solid (like those in the parents) in three, namely in two males and one female. In the remaining male and two females the hoofs were double, as in the animal under ordinary circumstances.

Four of the young pigs are now living (a pair of solid-hoofed and a pair of normal-hoofed), a male solid-hoofed and a female split-hoofed specimen having died within a few days of birth.

On examining the feet of the deceased male solid-hoofed specimen, it was seen, as might have been inferred from an inspection of the living animals, that all the monstrosity is confined to the ungual phalanges. The proximal and second phalanges are separated as usual, whilst at the extreme distal ends of the ungual phalanges these bones are completely fused together; and, further, there is a third ossicle developed at their proximal ends, where they are not completely united, between and above them.

It might have been imagined that the deformity was simply the result of an agglutination along the middle line of the two completely formed digits; but such is not the case, the nail-structure being absent in the interval, where it is replaced by bone with a transverse cartilage below it. The nail is continued straight across the middle line of the hoof, as in the horse. In Mr. Darwin's 'Animals and Plants under Domestication' (ed. 2, vol. i. p. 78), a full account will be found of several cases in which an exactly similar deformity existed.

## 4. Description of a New Species of *Helix* from South Australia. By George French Angas, C.M.Z.S.

[Received January 9, 1877.]

Helix (Rhagada) kooringensis, n. sp.

Shell umbilicated, somewhat globosely lenticular, rather thin, strongly obliquely flexuously corrugated, the corrugations more or less elevated and irregular, the interstices crossed with short, impressed, interrupted, transverse lines, especially on the basal portion of the last whorl, cretaceous, white; spire flatly conoidal, apex obtuse, sutures impressed; whorls 5, slightly convex, the last very strongly flatly carinated, not descending in front, the base tumid

around the umbilicus; aperture oblique, subquadrate; outer lip simple; columella arcuate, slightly thickened and partly expanded over the umbilicus.

Diam. maj. 1 inch, min. 10 lin., alt. 6 lin.

*Hab.* Found 30 miles in a N.E. direction from the Burra Mines, South Australia (*F. G. Waterhouse*).

This remarkable species is very similar in the character of its sculpture to *H. silveri*, Ang.; but the corrugations are less regular, the umbilicus is larger, the shell is flattened, and the last whorl very prominently keeled.

## 5. Descriptions of two Genera and twenty Species of Marine Shells from New South Wales. By George French Angas, C.M.Z.S., F.L.S., F.R.G.S., &c.

[Received January 11, 1877.]

(Plate V.)

Purpura (Cronia) anomala, n. sp. (Plate V. fig. 1.)

Shell ovately fusiform, rather solid, ornamented with a brownish-orange band spotted with black encircling the last whorl, and appearing again just above the sutures of the upper whorls, and with irregular undulating longitudinal chestnut lines, strongest near the base of the last whorl; whorls 5, angulated at the upper part, distantly longitudinally ribbed, the ribs stout and rounded and becoming swollen and nodulous above, transversely finely ridged throughout; spire elevated, apex sharp; aperture elongately ovate; outer lip arcuate; columella nearly straight, with a moderate callus overlapping the pillar.

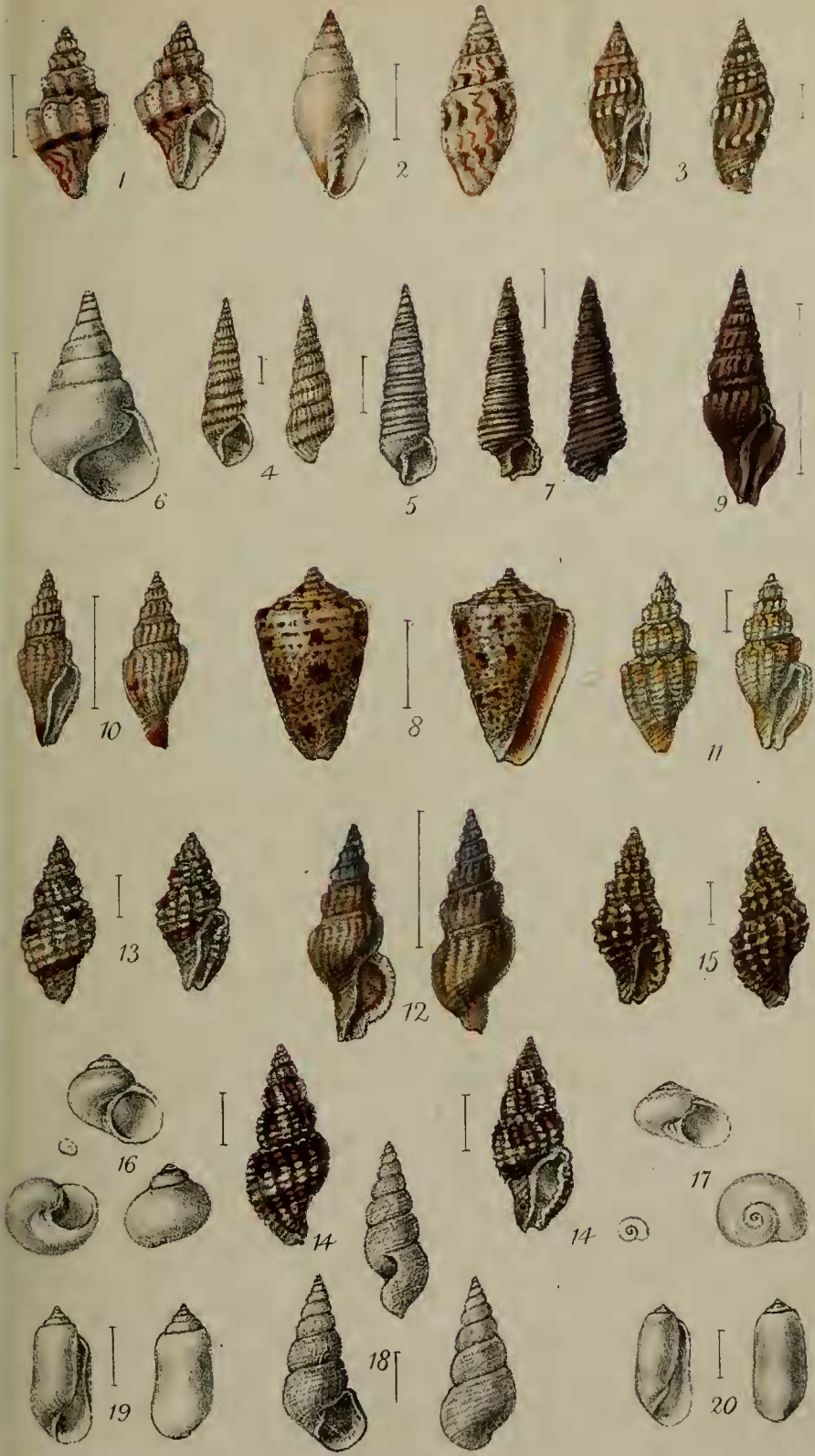
Length 4½, breadth 2 lines.

*Hab.* Dredged outside Port-Jackson Heads, in 25 fathoms (*Brazier*).

A curious little shell, from deep water, which I have placed provisionally in Messrs. H. and A. Adams's subgenus *Cronia*, represented by the *Purpura amygdala*, Kien.

### Genus Microvoluta, Angas.

Shell small, ovately fusiform, solid, smooth, shining; spire as long as the aperture, apex papillary; whorls simple; aperture narrowly ovate; columella with 4 strong transverse plaits, the anterior




G Sowerby lith. Hanhart imp

NEW SPECIES OF MARINE MOLLUSCA
*from New South Wales*

one the smallest; outer lip thin, simple, slightly contracted at the base; base rounded, spout-shaped, with a flexuous bend upwards towards the columella, which is a little thickened and reflected below the plaits.

MICROVOLUTA AUSTRALIS, n. sp. (Plate V. fig. 2.)

Shell ovately fusiform, solid, smooth, shining, with very fine longitudinal lines of growth, white, or ornamented with two rows of distant irregular chestnut blotches and zigzag lines; spire elevated, apex obtuse, papillary; whorls $5\frac{1}{2}$, slightly convex; aperture narrowly ovate; outer lip simple, a little contracted below; base rounded; columella furnished with four prominent transverse plaits.

Length 5 lines, diam. $1\frac{3}{4}$ line.

*Hab.* Dredged in 25 fathoms water, outside Port-Jackson Heads (*Brazier*).

The deep siphonal notch, and the toothed projection of the base of the pillar, so characteristic of the volutes, are absent in this curious little genus.

COLUMBELLA (ANACHIS) SPECIOSA, n. sp. (Plate V. fig. 3.)

Shell minute, fusiform, thin, subtransparent, green, ornamented with very fine undulating chestnut lines, and encircled by two bands of irregular square or crescent-shaped opaque white spots; whorls 5, the last longitudinally plicate above, smooth below.

Long. $1\frac{1}{2}$, lat. $\frac{1}{2}$ line.

*Hab.* Port Jackson (*Brazier*).

A very elegantly painted, minute shell, of great beauty.

TURBONILLA FESTIVA, n. sp. (Plate V. fig. 4.)

Shell acuminately turreted, semipellucid, white, ornamented with a narrow pale brown band at the centre of the whorls, two on the last whorl; whorls 8, rather convex, finely longitudinally plicate, the interstices, under the lens, crossed with extremely minute transverse punctured lines; sutures strongly impressed; the last whorl smooth at the base; aperture oblong-ovate; outer lip simple, arcuate.

Length 2 lines, breadth $\frac{3}{4}$ line.

*Hab.* Port Jackson; deep water (*Brazier*).

CINGULINA BRAZIERI, n. sp. (Plate V. fig. 5.)

Shell subulately turreted, moderately thin, whitish, shining; whorls 11, very slightly convex, with three flattened spiral ribs separated by a deep, narrow groove, the lowest rib the broadest; sutures impressed; base smooth, convex; aperture subquadrate; outer lip thin, arcuate; columella straight and slightly thickened.

Length 4 lines, breadth 1 line.

*Hab.* Port Jackson.

APICALIA GUENTHERI, n. sp. (Plate V. fig. 6.)

Shell globosely subulate, thin, subpellucid, shining, horn-coloured,

very finely longitudinally striated, and showing, beneath the lens, minute transverse striæ on the upper whorls; whorls 7, very slightly convex, flattened immediately below the sutures, the last large, inflated, and hardly subangulate at the periphery; apical whorls of spire wanting; sutures impressed; aperture semilunar, pointed behind and rounded in front; columellar margin arcuate, thickened towards the base; outer lip thin, simple, rounded, a little flattened above.

Long. 7, diam. $4\frac{1}{2}$ lines.

*Hab.* New South Wales (coll. Brit. Mus.).

This curious species I have provisionally placed in Mr. Arthur Adams's genus *Apicalia* rather than among the true Stylifers. The family Styliferidæ requires revision.

CERITHIOPSIS PURPUREA, n. sp. (Plate V. fig. 7.)

Shell elongately acuminated, moderately solid, purplish brown, with the last rib on each whorl grey; whorls 11 or 12, encircled with rounded equidistant ribs, 4 to a whorl, the last smaller, an extra rib on the base of the last whorl, which is flattened and very minutely striated, the interstices finely longitudinally striated; nucleolar whorl sinistral; aperture quadrately ovate; outer lip thin; columella arcuate and produced in front.

Length $3\frac{1}{2}$ lines, breadth 1 line.

*Hab.* Dredged off Shark Island, Port Jackson.

This species differs from *C. crocea*, Ang., in being smaller and more cylindrical, with a narrower base, in its style of colouring, and in having the lateral outline less rectilinear. A variety occurs of a pale livid brown colour.

CONUS (STEPHANOCONUS) SMITHI, n. sp. (Plate V. fig. 8.)

Shell small, stoutly conoidal, irregularly, faintly, longitudinally striated by the lines of growth, finely transversely grooved towards the base, straw-colour clouded with pale chestnut; the upper whorls ornamented with distant dark chestnut flames, a few scattered spots of the same colour, indicating two bands, occurring on the body-whorl, which is encircled throughout with equidistant narrow fillets of a pale hue closely reticulated with chestnut spots; spire elevated; whorls turreted, concave, radiately lirate; apex papillose; aperture rather wide, the outer lip angled above at its junction with the whorl, nearly straight, and parallel to the columella.

Length 5, breadth 3 lines.

*Hab.* Cape Solander, Botany Bay (*Brazier*).

A very prettily painted little species, belonging to the same section as *C. rutilis*, Menke.

DRILLIA ÆMULA, n. sp. (Plate V. fig. 9.)

Shell elongately ovately fusiform, purplish brown; whorls 10, strongly carinated a little below the sutures and sharply angulated in the middle, below which descend irregular longitudinal ribs nodulous at the angle, strongly transversely ridged below the angle, and more finely above, the upper space between the angle and the

suture being crossed with delicate crescent-shaped descending striæ; spire sharp; aperture elongately ovate; outer lip simple, a little contracted below; posterior sinus moderate; canal short, scarcely recurved.

Length 1 inch, breadth 4 lines.

*Hab.* Coasts of New South Wales.

This species is allied to *D. harpularia*, Des Moul., from South Australia, but differs from it in having transverse ribs on the lower whorl, and being nodulous at the summits of the longitudinal plicæ. The aperture also differs in form.

There are specimens of this shell in the British Museum, from New Zealand, which have the ribs and nodulous sculpture more prominent than in the type. There are also 2 examples of a variety of a uniform dull yellow colour.

MANGELIA JACKSONENSIS, n. sp. (Plate V. fig. 10.)

Shell elongately fusiformly turreted, solid, pale fulvous yellow; whorls 7, angulated and flattened at the upper part, longitudinally somewhat prominently ribbed, the ribs slightly nodulous at the angle of the whorl, the interstices crossed with narrow grooved lines in pairs, which are interrupted by the longitudinal ribs; aperture elongately ovate; outer lip thin, simple; base of columella sometimes tinged with brown; posterior sinus very shallow.

Length 7, breadth 2 lines.

*Hab.* Dredged off Port-Jackson Heads in 25 fathoms (*Brazier*).

MANGELIA FLAVESCENS, n. sp. (Plate V. fig. 11.)

Shell ovately fusiformly turreted, solid, pale buff, sometimes tinged with yellowish orange on the ribs; whorls $6\frac{1}{2}$, conspicuously angled below the sutures and longitudinally distantly stoutly ribbed, the ribs sharply nodulous at the angle, the lower half of the last whorl finely transversely ridged; aperture elongately ovate, outer lip flattened inwards; posterior sinus moderate, slanting upwards.

Alt. $2\frac{1}{2}$ lines, diam. $1\frac{1}{4}$ line.

*Hab.* Port Jackson (*Brazier*).

In one specimen the ribs are suffused with orange at the angle.

CLATHURELLA BRENCHLEYI, n. sp. (Plate V. fig. 12.)

Shell fusiformly turreted, moderately solid, light brown inclining to ash-colour towards the apex; whorls 8, slightly angulated at the upper part, and somewhat compressed next the sutures, longitudinally more or less prominently ribbed, the ribs crossed with regular elevated ridges, which are less distinct below the sutures, from which descend very fine and close-set crescent-shaped striæ as far as the angle of the whorl, crossing the concentric lines; spire sharp, apex dark brown or purple; aperture elongately ovate, brown within; outer lip denticulated at the edge, crenate within, and margined with white; posterior sinus broad and shallow; canal short, wide, and recurved.

Length 9, breadth 3 lines.

*Hab.* Port Stephens, New South Wales (*Brazier*).

Clathurella rufozonata, n. sp. (Plate V. fig. 13.)

Shell fusiformly turreted, solid, white, sometimes with a zone of double interrupted chestnut lines near the base of the last whorl, similar chestnut markings being occasionally apparent here and there near the upper portion of the whorls; whorls 6, convex, longitudinally ribbed and crossed with transverse ridges that become sharply and prominently nodulous upon the ribs; spire sharp, apex light brown; aperture narrowly quadrate; outer lip varicose and denticulated; posterior sinus moderate.

Length $2\frac{1}{2}$ lines, breadth 1 line.

*Hab.* "Bottle and Glass" rocks, Port Jackson (*Brazier*).

A pretty little white species presenting a more or less beaded appearance all over, sometimes marked with interrupted transverse chestnut lines.

Clathurella pustulata, n. sp. (Plate V. fig. 14.)

Shell fusiformly turreted, moderately solid, white, irregularly longitudinally flamed with brown on the upper whorls, with two broad brown bands on the last whorl; whorls 6, convex, longitudinally costate, with about 10 rounded ribs, encircled by about the same number of narrow prominent ridges that become slightly nodulous at the intersections, the interstices showing, under the lens, very faint descending striæ; the lower portion of the basal whorl and the pillar strongly granulated; spire sharp; aperture elongately ovate; outer lip thickened and varied behind, dentate within; columella nearly straight above, slightly sinuous below; canal short and open; posterior sinus broad and shallow.

Length $3\frac{1}{2}$ lines, breadth $1\frac{1}{2}$ line.

*Hab.* Port Jackson (*Brazier*).

This species, which is prettily variegated with ash-brown, may be at once recognized by the stout granules at the base of the pillar.

Clathurella modesta, sp. nov. (Plate V. fig. 15.)

Shell fusiformly turreted, solid, fulvous brown; whorls $5\frac{1}{2}$, convex, stoutly and distantly longitudinally ribbed, and crossed with prominent erect ridges becoming sharply nodulous at the intersection; spire sharp; aperture narrowly ovate; outer lip somewhat flattened and thickened, strongly dentate within; columella a little sinuous, with a few small granulations at the base of the whorl; posterior sinus rather broad.

Alt. $2\frac{1}{2}$ lines, diam. 1 line.

*Hab.* Port Jackson (*Brazier*).

Genus Cirsonella, Angas.

Shell minute, globosely turbinate, smooth, narrowly umbilicated; aperture circular; peritreme continuous, slightly thickened.

Cirsonella australis, n. sp. (Plate V. fig. 16.)

Shell globosely turbinate, narrowly umbilicate, semiopaque, smooth,

shining, white; whorls 4, convex; the last large, rounded at the periphery; aperture circular, peritreme continuous, slightly thickened on the columellar margin.

Alt. 1 line, breadth 1 liue.

*Hab.* Found in shell sand, Botany Bay, New South Wales.

This little shell differs from *Crossea*, A. Ad., in the absence of the basal tooth so characteristic of that genus. It will not agree with *Putilla*, A. Ad., as in the latter genus the peritreme is not continuous; nor can it be referred either to *Microthyca*, A. Ad., or *Umbonella*, A. Ad. I place it provisionally amongst the *Trochidæ*.

Ethalia brazieri, sp. nov. (Plate V. fig. 17.)

Shell depressedly orbicular, white, shining, semitransparent, smooth, with numerous fine concentric impressed lines both above and below the sutures and at the base of the last whorl; whorls $3\frac{1}{2}$, rapidly increasing; suture impressed, with a narrow opaque band; last whorl rounded at the periphery; base slightly excavated; aperture subcircular; outer lip thin, arcuate; columella with a moderate callus expanded over the umbilical region.

Diam. 2 lines, alt. 1 line.

*Hab.* Shell sand, "Sow and Pigs" reef, Port Jacksou (*Brazier*).

Myonia sinuata, n. sp. (Plate V. fig. 18.)

Shell elongately turreted, thin, semipellucid, white, transversely striated with narrow, equidistant, opaque diaphanous lines, and crossed on the last whorl with extremely delicate longitudinal striæ; whorls 8, convex; sutures channelled; aperture ovate, angled above, rounded below; columella arcuate, a little flattened and reflected over the body-whorl; outer lip deeply sinuous above, forming a sharp angle at its junction with the last whorl, rounded and effuse below.

Alt. $3\frac{1}{2}$ lines, diam. $1\frac{1}{2}$ line.

*Hab.* Dredged on the "Sow and Pigs" bank, Port Jackson (*Brazier*).

Although in this shell the slight plait or twist on the columella is not discernible, it otherwise resembles a *Myonia*; and I have therefore placed it in that genus, which belongs to the *Acteonidæ*, rather than with *Monoptygma* or *Menestho*. The sinuous outer lip is a remarkable feature in this species.

Tornatina hofmani, n. sp. (Plate V. fig. 19.)

Shell cylindrical, white, very finely striated by the lines of growth, with a few distant irregular transverse striæ discernible towards the lip on the body-whorl; whorls $5\frac{1}{2}$, the upper ones slightly convex, and channelled at the sutures, the last a little shouldered above and very slightly concave in the middle; apex sharp; aperture narrow above, dilated below, and rounded at the base; outer lip thin, arched when viewed laterally, and slightly contracted in the middle; columella somewhat thickened below, with a small blunt flexuous pro-

jection near the base, and covered by a callus extending nearly to the top of the whorl.

Length $3\frac{1}{2}$ lines, breadth $1\frac{1}{2}$ line.

*Hab.* "Sow and Pigs" reef, Port Jackson (*Brazier*).

TORNATINA BRENCHLEYI, n. sp. (Plate V. fig. 20.)

Shell ovately cylindrical, white, shining, very finely striated by the lines of growth, and exhibiting only faint traces of spiral striation; whorls $4\frac{1}{2}$, the two apical ones forming a small tubercle, the rest somewhat elevated, turreted, and separated by a deeply but not broadly channeled suture; aperture narrow above, gradually dilating and curved at the base; the outer lip not extending to the top of the whorl and slightly contracted in the middle; the columella furnished with a stout callous plication, which is connected above with the labrum by a thin callous deposit on the whorl.

Length 3 lines, breadth $1\frac{1}{4}$ line.

*Hab.* Dredged outside Port-Jackson Heads in 10 fathoms water (*Brenchley*), coll. Brit. Mus.

EXPLANATION OF PLATE V.

Fig. 1. *Purpura* (*Cronia*) *anomala*, p. 34.
2. *Microvoluta australis*, p. 35.
3. *Columbella* (*Anachis*) *speciosa*, p. 35.
4. *Turbonilla festiva*, p. 35.
5. *Cingulina brazieri*, p. 35.
6. *Apicalia guentheri*, p. 35.
7. *Cerithiopsis purpurea*, p. 36.
8. *Conus* (*Stephanoconus*) *smithi*, p. 36.
9. *Drillia æmula*, p. 36.
10. *Mangelia jacksonensis*, p. 37.
11. —— *flaveseens*, p. 37.
12. *Clathurella brenchleyi*, p. 37.
13. —— *rufozonata*, p. 38.
14. —— *pustulata*, p. 38.
15. —— *modesta*, p. 38.
16. *Cirsonella australis*, p. 38.
17. *Ethalia brazieri*, p. 39.
18. *Myonia sinuata*, p. 39.
19. *Tornatina hofmani*, p. 39.
20. —— *brenchleyi*, p. 40.

## 6. Notes on *Eliomys melanurus* and on some other Rodents of Palestine. By H. B. TRISTRAM, F.R.S., C.M.Z.S.

(Plate VI.)

By far the richest part of the fauna of the desert-regions of Western Asia is its Rodents; and it is certainly that of which we know the least. Almost all the small mammals of the stony region south of Judæa, of the whole Sinaitic peninsula, and of the vast sandy and rocky expanses which stretch with little variation from Damascus and Moab to Bagdad, are crepuscular or nocturnal in their habits.